

PRINTER RUSH
(PTO ASSISTANCE)

Application : 09/891895 Examiner : Phan GAU : 2638
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DOC CODE	DOC DATE	MISCELLANEOUS
<input type="checkbox"/> 1449	_____	<input type="checkbox"/> Continuing Data
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<input checked="" type="checkbox"/> SPEC	6-26-01	

[RUSH] MESSAGE: Specification page 2, line 15 has docket number only and is missing application no.

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REV 10/04

of high speed data links, and thereby achieve much longer working distances without repeaters on singlemode fiber.

In order to compensate for singlemode dispersion, a method is required for narrowing the widths of optical pulses being launched into the fiber, without resorting to a special type of expensive laser device. It is known that launching a Gaussian optical pulse through a Gaussian wavelength selective bandpass filter will reduce the pulse width. There is a tradeoff of pulse width vs. optical power. A higher power transmitter is required, but this can be easily achieved with current transceiver designs simply by increasing the laser bias current. However, it is not practical to implement this tradeoff unless a controlled method exists for matching the center wavelength of an arbitrarily chosen laser to the center of a filter passband. Otherwise, the optical loss between the laser and filter becomes too great and any advantages from reducing the pulse width are lost. One method and system for narrowing the widths of optical pulses is disclosed in copending patent application no. ⁰⁹⁸⁶⁵²⁵⁶ (Attorney Docket FIS920010069US1), for "Apparatus and Method for Wavelength-Locked Loop for Systems and Applications Employing Electromagnetic Signals," filed May 22, 2001, the disclosure of which is hereby incorporated herein in its entirety by reference. The present invention is an improvement on the system described in this copending application.

Summary Of The Invention

An object of this invention is to extend the distance for high data rate protocols such as ten and forty Gigabit Ethernet Links and Synchronous Optical Networks (SONET) using dispersion compensation.

Another object of the present invention is to overcome the dispersion limit of high speed optical data links, and thereby achieve much longer working distances without repeaters on singlemode fiber.